

2022 CHINA SOFTWOOD SUPPLY AND DEMAND OUTLOOK REVIEW



Tier One China city Shenzhen, with photos taken in 1999 and 2018 from exactly the same position.

The population of Shenzhen expanded from a fishing village with a population of 59,000 in 1980 ---

--- to 5.2 million in 1999 ---

--- and to 12.8 million in 2022.

The China-wide massive government 'Real Estate Development Support' fueled much of China's GDP growth for the last 25 years.

This in turn fueled a huge increase in softwood log and lumber import demand, especially from 2010 to 2019.

Ancient Chinese proverb: 'It all depends on the price'

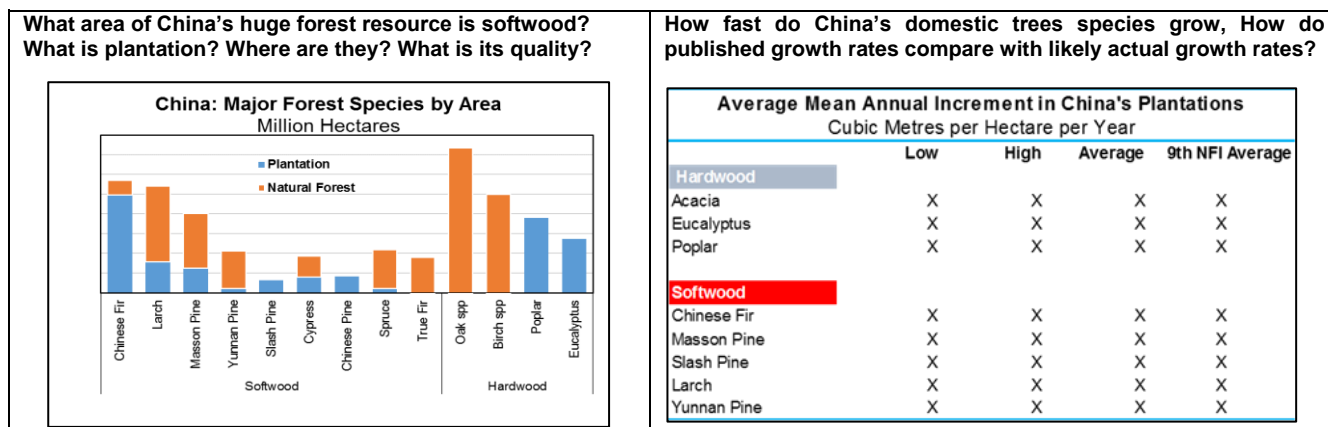
But — what will the demand, and the supply of China domestic and imported softwood be in 2027 and in 2032?

China Softwood Supply And Demand Outlook Review

The 2022 edition of the 'China Softwood Supply And Demand Outlook Review' is the inaugural edition produced by DANA Publishing (see experience of authors later).

This Review is a very important information tool for everyone involved/interested in importing softwood (SW) logs and lumber into or exporting these wood products to China. The Review is more than 200 pages and provides 9 maps, 26 tables, 120 charts, and profiles 27 countries which export SW logs and lumber to China together with historic supply data for each.

It provides the analytical framework, and then forecasts for China's demand for softwood 'Log Roundwood Equivalent' (RWE) in 2027 and 2032, and provides forecasts for SW log, lumber and RWE volume availability to export to China of 27 countries in 2027 and 2032.



Review Chapters

Introduction:

Photographs of China forests, import vessels, China domestic logs and sawmills, log importing vessels, authors' experience and motivation for writing and publishing the Review in 2022

China Domestic Forest Resources and Wood Supply

This 58 page chapter identifies China domestic forest resources by regions, provinces and species, with annual total, and softwood harvest trends. It includes maps showing the location of China's natural and plantation forests and softwood forests. It discusses China government policy and its likely impacts on future China softwood harvest volumes and quality

Global Softwood Log and Lumber Imports to China

This 69 page chapter introduces China's history of importing softwood logs and lumber over the past 35 years, provides the four major softwood log import and five major lumber import 'subplots'

China Softwood Demand Outlook

This 29 page chapter reviews how China's annual GDP growth has performed over the last 55 years and the future impact from the change from a 'mortgage to a 'high technology — consumer' economy; shows the correlations between total softwood and imported softwood demand and construction starts, and uses a (very) high R² regression to forecast housing starts (in millions m²) in 2027 and 2032 — and shows images of various Tier 1,2,3 and 4 cities

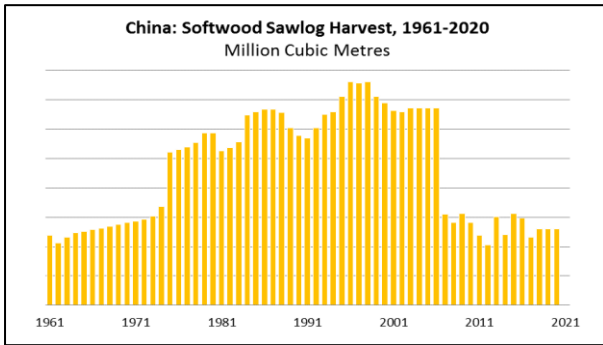
China Softwood Domestic and Import Supply Forecasts

This 19 page chapter discusses challenges to the China domestic softwood supply in the future, summarises 2021 and 2022E domestic log supply and import log and lumber and RWE volumes by 27 countries; then provides forecasts of China domestic SW supply, and detailed log and lumber import forecasts by 27 countries for 2027 and 2032

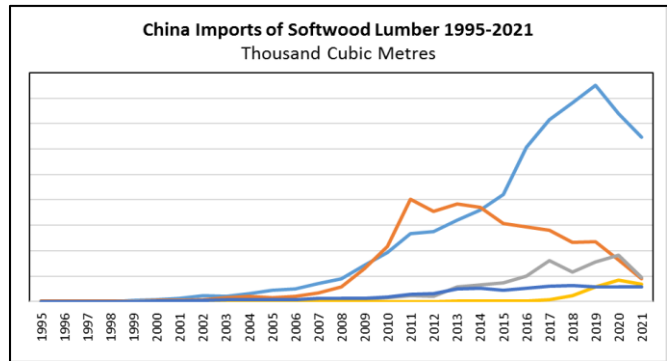
Appendix 1: Impacts of Global Climate Change

This 34 page appendix illustrates several charts of CO₂ intensity in the atmosphere (over the last 800,000 years) and temperature changes, and profiles existing and current climate change impacts of 12 countries/regions. It provides a forecast of the possible impact of climate change on softwood harvests of 13 countries exporting softwood logs and lumber to China, for 2027 and 2032

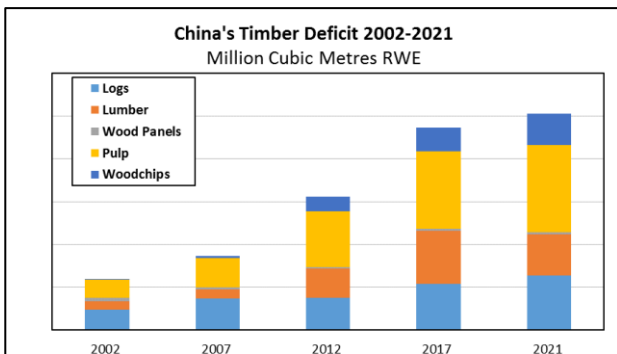
China used to have magnificent softwood forests. What happened to them? What happened to the harvest? Will it ever recover?



What have the four biggest China softwood log import stories been over the last 25 years?



China's annual timber 'deficits' increased by four times from 2005 to 2021. That deficit has to be made up with imported wood fibre. What will these 'deficits' look like in 2027 and in 2032?



What are the forecasts for China and importing countries SW log and lumber capacity to supply in 2027 and 2032? What will China Demand be?

| China Domestic & Import Supply Based | 2021 | 2022E | 2027F | % Change | 2032F | % Change |
|--------------------------------------|----------------------|-------|-------|----------|-------|----------|
| | Million cubic metres | | | | | |
| Base Case | | | | | | |
| Domestic SW Logs | X | X | X | X | X | X |
| Import SW Logs | X | X | X | X | X | X |
| Import SW Lumber | X | X | X | X | X | X |
| Import SW Lumber RWE | X | X | X | X | X | X |
| Total Import Log RWE | X | X | X | X | X | X |
| Total China Log RWE | X | X | X | X | X | X |
| % Import Log RWE | X | X | X | X | X | X |
| % Import Lumber RWE/Total Import RWE | X | X | X | X | X | X |
| China Demand Based | | | | | | |
| Total Import Log RWE | X | X | X | X | X | X |

About the Authors:

Mr. Dennis Neilson is a Director of the New Zealand based international forest industry advisory and publishing firm, DANA (NZ) Limited. Dennis co-organised the first shipment of New Zealand Radiata pine logs to China in 1985, and has visited ports and sawmills exporting logs and lumber to China — in New Zealand, Australia, Canada USP/NW, US South, Russia, Germany, Finland, Sweden, Brazil, Chile and Uruguay. He has travelled to China more than 50 times. Dennis authored *'The Chinese Softwood Sawmilling & Veneer / Plywood Sector'* (2014) and was the lead author of RISI's *'Russian Timber: A Growing Force in World Trade'* (2019)

Mr. Gavin Hao has worked in the forestry/pulp/paper industry since 2005. He has focused on wood products market research, forest investment due diligence, forest valuation, cost and price benchmarking, and in forest management. Prior to starting Gingko Consulting in 2019, Gavin was employed in senior positions in China with international forest industry companies including Forest Manager at Stora Enso (2005 -2009), Consultant with Poyry (2009-2010) and China specialist Forestry Consultant with RISI/FastMarkets RISI (2010-2019.) Gavin has worked on many forest valuation/investment and due diligence projects across China: from Northeast (China-Russia border) to South (Hainan Island), and has visited many domestic Chinese Fir / Masson Pine plantations in China. Gavin co-authored RISI's *'China Timber Supply Outlook: A Comprehensive Analysis and Outlook'* (2010, 2011, 2013, 2015, 2017)

The 34- page **Climate Change Appendix** provides slides of major long term trends in CO₂ intensity and temperature changes, and provides 'canary in the coal mine' examples of climate change impacts on 13 countries/regions.
Will Climate Change softwood harvests? If so, in what countries?



The melting of the 1.5 trillion tonnes of CO₂ holding Siberian permafrost is one of the three major Climate Change impacting events on earth.
Will this affect the huge Russian harvest volumes in the future? What are the other two major impacting events?



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